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AUTHOR Whiteford, Emma B.
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ABSTRACT

Objectives of a pilot workshop for selected home economics teachers working with special needs students who were programmed into regular home economics classes were that each participant should (1) become aware of her personal teaching styles (and alternatives); (2) learn to match teaching styles with student learning styles; (3) become familiar with a variety of teaching models/techniques to promote learning for students with various types of special needs; (4) be able to use suggested criteria for evaluation of materials; (5) develop or adapt instructional materials; and (6) evaluate the content and presentation of the workshop series. Thirteen teachers participated in five two-hour sessions with emphasis on the following topics: awareness of teaching styles; techniques, ideas, and learning resources; selection of instructional resources; alternative learning methods for increased individualization and adaptation of instruction; and ways of implementing individualized instruction. The teachers judged the experience to be valuable and recommendations were that increased opportunities should be provided for teachers to enroll in workshops and that workshops should be credit-bearing. Descriptions of each of the five workshops, sample materials used, and a ten-page bibliography (including prices and availability) are appended. (BL)

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SPECIAL NEEDS STUDENTS IN REGULAR HOME ECONOMICS PROGRAMS: 1977 REPORT ON MINNESOTA SECONDARY IN-SERVICE TEACHER EDUCATION

Report of a Project

by

Emma B. Whiteford

Project Director

With the Special Assistance of

Linda Tillman

Project Assistant

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Division of Home Economics Education

Department of Vocational and Technical Education

College of Education

University of Minnesota at Minneapolis-Saint Paul

for the

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Emma B. Whiteford

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Errata:

Page 4, line 22. In the title omit the and substitute Programs for Classroom

Page 24, line 5. Insert "slow learning," after "problems,"

Page 43, under "Learning Aids..." Substitute "Johnson," for "John,"

SPECIAL NEEDS STUDENTS IN REGULAR HOME ECONOMICS PROGRAMS: 1977 REPORT ON MINNESOTA SECONDARY IN-SERVICE TEACHER EDUCATION

For many years our national purpose in education has included the goal of assisting every individual to develop as fully as he/she is capable. Although the ideal of equality of opportunity in education has not been fully achieved, in recent years evidence of progress toward that goal has included federal grants to encourage specialized programs, state legislation, court decisions concerning individual rights, and greater concern for equal educational opportunity. (Rossmiller, Hale, and Frohreich, 1970; Reynolds, 1974; and McLure, 1975.)

In Minnesota, consideration is increasingly being given to moving those who are exceptional and/or disadvantaged from centralized treatment or educational institutions to home care or community centers. Consequently, increasing numbers of exceptional and/or special needs students are enrolled or "mainstreamed" into regular school programs.

At some time in their educational experience, exceptional and/or special needs students have been enrolled in home economics programs. With the increased attention which is given to phasing all but the most severely handicapped students into the regular school programs, however, it is anticipated that greater numbers of students with more kinds of exceptionality and/or special needs will be enrolled in programs that provide for the life survival skills and the career clusters for which home economics teachers are responsible. These home economics programs are offered on both the exploratory and preparatory levels.

Exploratory Study (Phase I)

To explore the extent to which students enrolled in home economics classes were identified as exceptional and/or have special needs, selected Minnesota home economics teachers were asked to respond to a questionnaire in 1976. This study was approved for funding by the Special Needs Programs Section of the Vocational-Technical Education Division of the Minnesota Department of Education. It was published in August of 1976 under the title Special Needs Students in Regular Home Economics Programs.[1]

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[1] Emma B. Whiteford, Special Needs Students in Regular Home Economics Programs: 1976 Survey of Selected Minnesota Secondary Teachers (Minneapolis-Saint Paul, Minnesota: Division of Home Economics Education, Department of Vocational and Technical Education, College of Education, University of Minnesota, 1976).

The teachers were also asked to report their views concerning their preparation for teaching exceptional and/or special needs students in their classes. In addition to the information which they provided in response to questions on the survey, they were asked to express their opinions and concerns relative to having special needs students in home economics classrooms.

This preliminary survey indicated that adaptive materials (Phase II of the on-going research program) and in-service teacher education (Phase III) are needed to implement programs designed to provide for exceptional and special needs students enrolled in regular home economics classes.

The Rationale for Mainstreaming

The present trend toward mainstreaming should not be thought of as being primarily an economy measure. It is based on the view that the educational services of a community provide a continuum in which special needs education is part of a structured whole.

This conception of educational services is presented by Evelyn Deno in the following "cascade" design:

FIGURE 1

A design of the cascade system of special education service (reprinted from an article by Evelyn Deno from the November 1970 issue of "Exceptional Children") was removed due to copyright.

The design indicates the differences in the number of children expected at the various levels of ability and makes clear how special education complements the regular program. The system serves as a diagnostic filter so that, on a long-term basis, the most specialized facilities are likely to be needed by the fewest children..

Deno explains that regular teachers need to have confidence in their ability to deal with most of the needs of students previously defined as "special." She says, "This confidence can only be accomplished by providing teachers with the skills and teaching circumstances required to meet the children's needs." She goes on to say that "special education needs to share with regular educators whatever expertise it may have acquired over the years or may generate through further experience and research. At the same time, it needs to gain better understanding of the potentialities of mainstream provisions."[2]

Underlying the philosophy of mainstreaming is the concept that children need to be programmed individually. The system is not a pattern that will be forced upon students; it is a structure which will enable individual students to use the parts of the system which will enable them to make best use of their abilities.

Pilot Workshop

In 1976-77 the continuation of the project included a pilot workshop in which selected home economics teachers participated in a series of activities designed to assist them in working with students having special needs. One aspect of the workshop was the continuing concern for exploring ways of improving teacher effectiveness in situations where special needs students are enrolled in regular home economics classes.

Specific objectives of the series of workshop sessions were that each workshop participant should:

1. become aware of her personal teaching styles (and alternatives)
2. learn to match teaching styles with student learning styles
3. become familiar with a variety of teaching models/techniques to promote learning for students with various types of special needs
4. be able to use suggested criteria for evaluation of materials
5. develop or adapt instructional materials
6. evaluate the content and presentation of the workshop series

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[2]Evelyn Deno, "Strategies for Improvement of Educational Opportunities for Handicapped Children: Suggestions for Exploitation of EPDA Potential," Exceptional Children in Regular Classrooms, ed. Maynard C. Reynolds and Malcolm D. Davis (Minneapolis, Minnesota: Department of Audio-Visual Extension, University of Minnesota, 1971), pp. 14-15.

The workshop sessions were based to a considerable extent upon Data Bank Guide--Learning Styles, by Smith and Bentley[3], a teacher training program produced by the Education Service Center, Region XIII, Austin, Texas.

The philosophy upon which this teacher training material is based is that all students vary in their styles of learning just as teachers vary in their styles of teaching and that the needs of special students can be met without labeling the students. The Foreword of the Data Bank Guide--Learning Styles, (Smith and Bentley, 1975c, p. iii), summarized the background of the teacher training program as follows:

> This training program is the result of five years of experience in working with school staffs to mainstream students into the regular classroom. The program describes effective models for mainstreaming and provides training in the "how to's" of individualizing instruction. It is hoped that the program will be helpful for those teachers who are in mainstream settings.

Workshop Organization

Because of scheduling difficulties and time limitations, the workshop was organized into five sessions with a minimum of two hours each.

Topics to be considered in the workshop sessions were chosen in response to specific needs expressed by home economics teachers who are working with special needs students. In the Whiteford survey, Special Needs Students in the Regular Home Economics Classroom, Minnesota secondary teachers reported most frequently the following types of special needs:

1. Reading problems
2. Slow learning
3. Mathematics problems
4. Intellectually gifted (in junior high school programs)

In addition, concerns were identified in these areas:

1. Reading level of textbooks
2. Interpersonal relations
3. Duplicated materials not understood
4. Verbal instruction not understood

Wherever possible, these identified special needs and concerns were given attention within the workshop structure by means of lecture, learning activities, and selected illustrative materials.

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[3]Pamela Bodoin Smith and Glee Ingram Bentley, Data Bank Guide--Learning Styles: Mainstreaming Mildly Handicapped Students into the Regular Classroom (Austin, Texas: Education Service Center, Region XIII, 1975c).

An advisory committee (see Appendix A) included representative home economics teachers, teacher educators, and supervisors of home economics and/or special education programs. In addition, persons in school administration and in supervision from the State Department of Education were included on the committee which aided the project staff in organizing the pilot workshop sessions with emphasis on the following topics:

Session I. Awareness
Session II. Techniques
Session III. Selection
Session IV. Adaptation
Session V. Application

Workshop participants were home economics teachers from the Saint Paul, Minnesota, Public Schools and systems within commuting distance of the Twin Cities who volunteered for the experience. Although 21 home economics teachers initially expressed interest in attending, 13 were enrolled in the sessions on a regular basis. (See Appendix B.) To provide information concerning the workshop plans, a brochure was sent to prospective participants. (See Appendix C.) As a part of the registration procedure, the teachers completed a brief informal survey form concerning their programs and their backgrounds. After summarizing the responses, it was concluded that, in general, the teachers who participated in the pilot workshop reported similar backgrounds to those who participated in the feasibility study (Whiteford, 1976) except that the proportion of teachers who reported large classes was slightly greater.

WORKSHOP SESSION I--AWARENESS

In this session, consideration was given to helping teachers increase an awareness of their own teaching styles and the range of flexibility of styles which they employed with their students. Attention was given, moreover, to the varied learning styles of students as reported by the participants and to the expressed preferences of students for learning styles (with implications for home economics experiences). In introducing the subject, Nedra Mehamey[4], the resource person, directed the teacher participants to think about how they themselves learn best as well as how they teach because we only know our own

[4]Nedra Mehamey, Coordinator for Special Learning Behavior Problems, Minnesota River Valley Special Education Cooprative Center, New Prague, Minnesota.

experience and we don't know how it compares with that of other people. To assist them in their assignment, teachers were asked to complete two two-part checklists designed to indicate if the respondent is an auditory or a visual learner on the one hand and also an auditorially or a visually oriented teacher on the other. If a teacher's response reflected few problems in auditory or visual learning or teaching, she was admonished to take special care in empathizing with students having learning difficulties. "It is so easy if we are good at something to have difficulty in empathizing with someone who isn't."

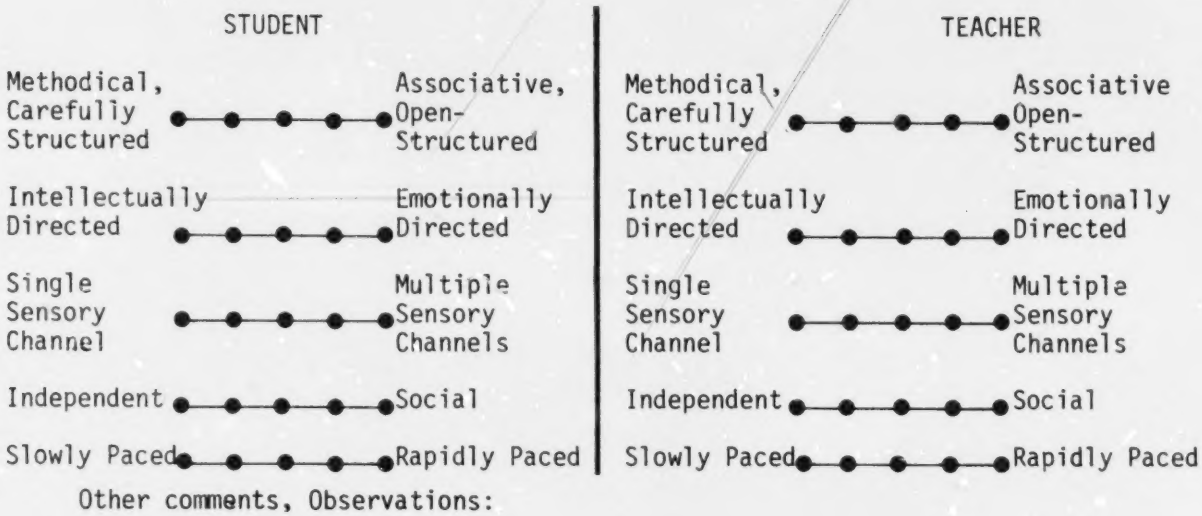
Another method of assessing teaching style involved an instrument which describes the elements of a teacher's individual instructional "style" focusing on the interaction between the students and the teacher. The resulting profile of the teacher indicates that the flexible teacher would be capable of the "teaching style" most appropriate to the students' requirements in the specific situation. The precise learning objectives for individual students would be sought through selected activities at a particular time.

Teaching style may be viewed as the composite, patterned ways of approaching the teaching task. In 1967-68, the Teaching Style Classification Scale was described in Style Is the Teacher, a report of a project in the Dade County Public Schools, Miami, Florida. (Cited in Smith and Bentley, 1975c.) The Classification Scale provided a means of categorizing variables contributing to a teacher's individual "style" when involved directly with students' learning activities. The Scale included five comprehensively described categories of behavior with five operational levels within each category. Later, Smith and Bentley (1975d) developed a less complex Styles Matching Chart with categories arranged in continua of opposites with a five-point scale between them. The instrument is suitable for both teachers and students to use in exploring teaching and learning styles. The Styles Chart facilitates teachers' understanding of the elements of their own teaching style, the identified needs of individual students, and the utilization of the information to maximize students' learning.

For their own information and as a tool for further study, the teacher participants were asked to identify their own teaching styles using the Styles Matching Chart which is presented on the following page as Figure 2.

FIGURE 2

STYLES MATCHING CHART



Other comments, Observations:

Adapted from the Participant Manual, Learning Styles. Mainstreaming Mildly Handicapped Students into the Regular Classroom, by Pamela Bodoin Smith and Glee Ingram Bentley, Education Service Center, Region 13, Austin, Texas, 1975d, page 4.

As a background for a realistic approach in the workshop, teacher participants were asked to identify three students from their classes and to complete the Styles Matching Chart for each one by placing an (x) at the appropriate point on the continuum for each of the pairs of characteristics of learning style. (See Figure 2.) Using this information coupled with that identified as their own teaching style characteristics, the teachers considered how to adapt their ways of working with the students so as to help them more effectively with their learning tasks. This information would be referred to again in later sessions of the workshop.

Classroom teachers should identify their students' learning styles as promptly as possible. For example, to gain information readily about students, a teacher may give a short factual explanation of a pertinent topic in a subject area. Next follow it with a short objective written quiz; then read the same quiz and ask the students to write a second set of answers for the questions. In comparing the responses from the two quizzes, most students will do

well on both. In the event, however, that a student did considerably better the second time, he may have a visual (reading) problem and should be referred for further testing. For most students, the presentation will not make a substantial difference. A few students become confused with auditory input; hence it is important to watch for inconsistent performance. (Mehamey, 1977.)

In considering what it means to be a visual learner, according to Mehamey, a person must perceive and accept the part of the visual stimuli which is meaningful while ignoring that which does not apply in the situation. Then the visual learner abstracts appropriate meaning from the selected stimuli for immediate use or converts the meaning into a form to be stored for later use. Tests which are given to determine visual learning customarily should use designs and pictures. Schools emphasize reading for visual information, but the ability to deal with letters has nothing to do with the ability to deal with designs or pictures.

An auditory learner is a person who perceives the sounds to be dealt with, separates them out from the background noise, and keeps these sounds in short term memory long enough so they can be brought together with other sounds until there is sufficient input to be a meaningful segment as, for example, a word. These segments must then be retained until they suggest some mental image or idea that can be used immediately or can be labeled and stored for later use. Like the visual stimuli, auditory stimuli of different kinds vary greatly in the manner in which they are utilized by individuals. For example, the ability to remember a story has little in common with the ability to repeat a non-ordered list of numbers.

Frequently, a student who would be an excellent visual learner for real objects and activities he can see is asked to be a visual learner through printed words, even though he may have a reading deficiency. In this instance, he is forced to learn through the auditory channel from what the teacher and other students say, although he has difficulty with auditory learning also. He may learn under these conditions auditorially, but testing is not ordinarily done auditorially; the student is usually given a written test. Consequently, he is at a disadvantage because he cannot demonstrate appropriately the information which he gained as an auditory experience under difficult conditions.

Although most people can learn either auditorially or visually and tend to switch back and forth with ease as the situation requires, most learning-disabled students have problems in both areas, especially for information that

is not immediately meaningful. In the event that a teacher has a strong preference, it is important that she favors neither her ability nor disability, but gives attention to focusing on altering teaching approaches and methods to provide successful learning experiences for students with special reference to those with learning difficulcies.

To provide a background of information helpful in teaching students with learning disabilities, a psychologist or someone else with similar specialized background can administer the Wechsler Intelligence Scale for Children (WISC) which conveys a profile of the student's abilities and disabilities and provides useful information for helping the student. The Wechsler Scale has a verbal section in the test based on the following components: information, comprehension, arithmetic, similarities, vocabulary, and digit span. The last requires repeating non-ordered numbers forward and backward. The non-verbal part of the test consists of a number of tasks to be completed: for example, picture completion, picture arrangement, block design, object assembly, and coding. (Wils and Banas, 1976, Mehamey, 1977.) Most learning-disabled students tend to be better at non-verbal tasks than they are at verbal ones. The difference may be more pronounced as the student gets older because much of the knowledge called for in the verbal tasks normally is acquired by reading, which this type of student does not do; consequently, the student may mistakenly be identified as slow mentally.

Teacher participants were introduced to a number of alternative methods of obtaining information useful in working with students: for example, interview schedules, interest inventories, and observation guides. In the workshop, copies were available to teachers to facilitate their trying them out with students in their classes, especially those providing information concerning students' preferred learning styles. (See Appendix D.) For the information of the project staff in planning for ensuing sessions, the teacher participants completed the Learning Preference Profile indicating how <u>they</u> like to learn. This information was compiled and used in planning methods of presentation throughout the remainder of the pilot workshop sessions. For example, experiences providing for independent, paired, and small group learning were included in the ensuing workshop sessions. In each session, attention was given to using teaching-learning modes which could be viewed as models useful in secondary school settings.

In conclusion, the first session of the pilot workshop focused attention on the consideration by the teacher participants of their own teaching styles,

as well as the importance of developing a more flexible style of working with students in their classes. At the same time, ways of assessing students' learning styles and preferences were considered as a means of adjusting teaching styles to achieve more satisfactory and satisfying teaching and learning settings.

WORKSHOP SESSION II--TECHNIQUES

The second session of the pilot workshop was organized into two parts. The first part was devoted to independent study and the identification of resource materials appropriate in an on-going teaching unit. These resource materials were to be viewed by the teaching participant as being useful by one or more of the three students for whom she had completed the Styles Matching Chart in the first workshop session.

After examining the materials, each teacher selected the preferred learning center in which to begin study, then moved to other centers in order of preference. Each learning center focused on techniques, ideas, and learning resources to illustrate each of the five learning styles introduced in Session I on Awareness. The second part of the session included three 20-minute simultaneous small group presentations with participatory experiences which were repeated to afford the participants the opportunity to try out each of the activities. If desired, after the presentations the participants were free to return to the learning centers for further exploration and study.

As each teacher participant arrived (because of inclement weather conditions, arrival was uneven), she was provided with a copy of a study guide which explained selected aspects of learning styles and directions for taking advantage of both the process and the products of the learning centers. The several aspects of learning styles explained in the guide included, for example, sensory factors, human interaction, and timing. For illustrative purposes in this report, the sensory factors in learning style have been selected for detailed consideration. Brief explanations of the sensory factors of auditory (hearing), visual (sight), and haptic (motor, tactile) learning or combinations of them are included for clarification.

The sense of hearing has an important place in the teaching-learning environment since teachers expect students to learn to a great extent by listening. Yet little has been done to help learners improve their skills in

gaining knowledge and understanding through listening experiences. If attention to improving listening skills were comparable, for example, to that provided for helping students with reading comprehension, many students would develop a learning style which for them would be preferred to learning by reading. Another aspect which is given little attention is aural discrimination. Do background sounds enhance or interfere with a student's learning when he/she is using some other sensory receptor at the same time? For example, does using a cassette recording in conjunction with illustrations on a flip chart help to explain and reinforce a selected food preparation procedure, and does background music provided with a filmstrip tend to contribute to learning? Possibly the tone and pitch of the teacher's voice is such an irritant that the student "tunes out" and misses the explanation of an assignment needed for completing the lesson satisfactorily. Obviously, such behavior merits study and more attention should be focused on these problems.

The second important sensory factory is sight. Learning by seeing involves, first, the use of arbitrary symbols to designate ideas and, second, the representation of ideas pictorially. The first mode deals with extracting the meaning of an author accurately from reading the printed word, which is frequently accepted as the favored channel for learning. The second mode is usually found in the use of movies, filmstrips, or illustrations. Most learners find that understanding the intended meaning through this mode is much more appealing and vivid. The adage "a picture is worth a thousand words" refers not to the ease with which a message is provided, but to the degree to which it is understood (Smith and Bentley, 1975c). In being sensitive to a variety of forms of visual sensory techniques, the teacher assists students in developing their communication skills while utilizing their individual learning styles.

Although there are three main sensory channels which are important for educational purposes (visual, auditory and haptic), for many years most instructional programs placed heavy emphasis on the first two. With recent substantial research and development, many innovative materials and techniques are available for conveying information and developing students' abilities and skills. Within the context of providing educational experiences for special needs/handicapped students, the variety afforded in the materials and media facilitates achievement because these learners frequently cannot learn successfully using the more conventional learning channels. With the increased variety of materials and media now available, learning directed through their available channel strengths is more readily successful (Smith and Bentley, 1975c).

Home Economics programs are uniquely suited to facilitate the learner's success and the reinforcement of developing self-esteem since learnings enhance the students' background in basic learning skills, personal-social learnings, and career-orientation experiences.

The third sensory factor to be considered in learning style is the haptic (motor, tactile) classification. Especially in their earlier years, children find that utilizing their sense of touch through feeling and manipulating objects facilitates learning. (Smith and Bentley, 1975c.) In a Child Development laboratory, for example, children may be helped to learn more about pets through providing opportunities to stroke gently the silky coat of a young kitten and the coarse hair on the back of a friendly Airdale. According to Smith and Bentley (1975c), attention should be given to helping learners of all ages develop their sense of touch. Selected experiences may be expected to enrich the sense of discrimination in choice-making. In food selection, for example, students learn about the qualities important to consider in selecting sufficiently mature fruits by carefully holding one in the hand to examine the smoothness of the skin, the slight mellowing of the flesh, and the appetizing aroma as indications of readiness for eating.

Although taste and smell, in general, have not been thought of as important considerations in learning styles, in home economics they may be expected to have a substantial role in effective learning. In the area of foods and nutrition, the senses of smell and taste are important channels of communication and learning in the preparation and service of foods of acceptable edible quality and flavor under sanitary conditions.

From the few examples of the sensory factors described, it is apparent that the sensory receptors (auditory, visual, and haptic) are seldom, if ever, used alone in the learning process (Smith and Bentley, 1975c). The opportunity to plan, prepare, and serve an attractive, adequate luncheon in the laboratory may be viewed as an effective means of reinforcing and evaluating the learning achieved by reading and/or the use of a sound filmstrip.

Using the Sensory Factors Checklist (Appendix E), the workshop participants were asked to indicate the sensory factors they used regularly in their classes and also to check the senses and degree of activity involved in the experiences they provided. At the same time, the teacher participants were asked to consider ways in which they could plan to increase the number and kinds of appeals to the sensory factors and the degree of activity they could provide for their students with special reference to the three students for whom they had completed the Styles Matching Chart.

As the teachers moved from one to another of the five learning centers as their interests and perceived needs suggested, each learning center focused on one continuum of the five learning styles (see Figure 2).

In each of the learning centers a variety of home economics instructional materials were displayed which were viewed as useful in working with students having associated learning difficulties. In addition, an outline of both learner and teacher styles for each side of the continuum with examples of behavior manifestations for each of the five continua were reviewed. Examples of the learning and teaching styles for the single sensory--multiple sensory channels illustrate the framework provided to assist teacher participants in identifying behaviors on the part of one student selected from the three described on the Styles Matching Charts as well as the teachers' own behaviors. (See Appendices F and G.) Teachers were asked to consider ways in which they could modify their teaching styles by offering greater variety in the auditory, visual, and haptic sensory channels to enhance the learning environments needed by the individual students they described. For example, some schools may have language masters available for use by teachers in working with special needs students. In the sensory channels learning center, a language master was demonstrated using home economics examples. The device was well adapted for use by individual students and small groups.

At the conclusion of the experience involving the independent study and learning centers, a large group discussion period provided an opportunity for exchanging ideas and reactions to the materials on display and/or those tried out in the participants' classrooms. Later evaluation responses indicated that insufficient time was provided in this portion of the workshop session for adequately discussing the variety of modes of instruction available and the means of implementing them. In repeating the workshop, this response should be given careful consideration.

The second part of the workshop session, as has been stated, was devoted to small group learning activities. Simultaneously, three small group lecture-discussion topics were presented and repeated three times so that the workshop participants could move from one group to another and attend all three lecture-discussions if desired. The small group presentations focused on the following topics:

1. "Helping Students to Develop a Positive Self-Concept," Sandra Speck, Resource Speaker, and Instructor, Home and Family Living, Saint Paul Child Development Center, Saint Paul Public Schools, Saint Paul, Minnesota.

All of the areas of Home Economics included a reference to buying (using money) as well as to related jobs. The program is directed at learning to use basic academic skills: words, language, and numbers as they relate to practical life skills. Much emphasis is placed on developing a positive self-concept (I am SOMEBODY!) and learning skills that they can practice at home and at school (I can do SOMETHING!).

In the Consumer Home Economics program, the students are learning about and experiencing life as they are living it. Home Economics provides an indirect route for students to learn about and to work on skills, attitudes, coordination, and manipulation as well as learn how to enjoy themselves. It provides satisfaction for many students because they can create and they can try new experiences.

2. "Task Analysis," Dr. Emma B. Whiteford, Resource Speaker and Project Director, University of Minnesota, Minneapolis-Saint Paul.

Task analysis is a more complex and a more rigorous intellectual discipline than many teachers realize. It involves a recognition of the long range objective and the identification of the component parts of the learning. These must be the observable parts necessary for achieving the long range objective. There needs to be a recognition of which component behaviors are dependent and which are independent. In performance, some behaviors cannot be completed before the completion of another or others; these are examples of dependent behaviors. Other behaviors which can be completed at any time and in any order are independent behaviors. The distinction between dependent and independent behaviors is important in determining the sequential order in successfully completing a task. (Lueke and Ehrgott, 1975. In Smith and Bentley, 1975a, Mager and Beach, 1967.)

As an example of a task analysis, the adjustment of the oven control in preheating an electric oven was discussed to illustrate the importance of the identification and sequence of component behaviors. The expected level of achievement should be specified. In considering the adjustment of the oven control, the component behaviors for the most part are dependent. For example, checking the oven to be certain that it is empty and the oven racks are placed properly in relation to the product to be baked must be done before setting the control and turning the switch.

In pairs, the teachers selected a procedure suitable for a task analysis and developed a plan for use in the classroom, including related conepts, vocabulary, and teaching aids.

3. Teaching Techniques--"Backwards Chaining" and "Physical Guidance," Linda Tillman, Resource Speaker and Project Assistant, University of Minnesota, Minneapolis-Saint Paul.

"Backwards Chaining"

> This teaching/learning technique can be summarized simply as teaching the last step first. The student is helped with the first steps (or the teacher may demonstrate) and allowed to complete the last step by himself. The process is continued by teaching each succeeding step backwards from the last until the student is able to complete the entire task and all the steps independently of teacher help.

"Physical Guidance"

> For some students, verbal directions, pictures or demonstrations do not convey the psychomotor concepts to be learned. One method or technique is to guide the student physically through the task, placing your hands over theirs and going through the motions (cutting with a knife, stirring ingredients in a bowl, etc.). In using physical guidance, it is important to remember two things: 1) tell the student that you are going to guide them, and 2) verbalize during the process what you are doing.

Thus, in the second session of the pilot workshop, teacher participants examined a variety of techniques, ideas, and learning resources illustrating each of the five learning styles appropriate for increasing the flexibility of a teacher's teaching style. Small group presentations and demonstrations focused on selected techniques appropriate for the special learning requirements of special needs students.

WORKSHOP SESSION III--SELECTION

The home economics teachers who had participated in the 1976 survey, Phase I of the project (Whiteford, 1976), reported that greater numbers of students had reading problems and were slow learners than were identified in other categories of special needs. Other concerns expressed by the teachers who participated in the survey included: the reading level of textbooks, interpersonal relations, duplicated materials not understood, and verbal instructions not understood. Several of the teaching participants in the workshop reported that they had used reading level indicators. Nevertheless, because readability was viewed as an important component in the selection of appropriate instructional materials, consideration was given in the workshop to the determination of the readability of various materials and its implications for instruction.

The focus of this session of the pilot workshop was on the selection of instructional materials with equal emphasis and care regardless of whether the

materials were complimentary, borrowed, or purchased. Consideration was given to the development of criteria useful in selecting materials appropriate for meeting student and teacher needs. Also, the types of reading level indicators were examined. Opportunity was provided for teacher participants to review selected materials displayed in the following categories: audio-visual, supplementary and supportive materials, free materials, and teacher resources.

To aid teachers in the selection of instructional resources with particular reference to meeting the learning needs of special needs students, Lily Beth Wahlberg[5], the resource speaker, discussed the role and function of the Special Instructional Materials Center (SEIMC) as a resource for teachers in the Saint Paul Public School System. Considerations in choosing materials included the following: acceptability to the student and teacher, ease in handling, effectiveness, area(s) of integration into the instructional program, purposes for which the material could be used, estimation of durability, and the possibility for creative application.

Beginning in the fall of 1976, a search was made for available instruments which would be useful in selecting appropriate instructional materials and would be readily usable by teachers and their special needs students. After careful exploration and experimentation with tentative forms, an instrument, "Analysis of Low Reading Level Materials" (Spitze, 1971), was identified. This was adapted to meet the need for an informative and readily usable instrument.

In the revised "Guide for Analysis of Instructional Materials" (Appendix H), the teacher is asked to identify on a five-point continuum the point at which in her judgment the book or bulletin falls in relation to the descriptive terms included in the guide. The first section is concerned with the content; the second describes the format. The guide was designed for use by the teacher in making selections from the wide variety of printed resources as she planned to meet the needs of students in her classes. One element of the criteria is concerned with an estimate of the suitability of the reading level for potential readers. To provide a reveiw of readability indicators, two instruments were selected for consideration in the workshop.

The Cloze technique (Appendix I), the first indicator considered, is a method of determining the appropriateness of materials in terms of their being understandable to the students who use them. The technique provides an actual

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[5]Lily Beth Wahlberg, Director of the Saint Paul Education Special Educational Instructional Materials Center, Saint Paul Public Schools, Saint Paul, Minnesota.

estimate of the potential comprehension to be expected from readers of a particular selection. It is a deletion method in which underlined blanks are substituted for selected words which have been removed from the reading material. The reader simply tries to guess which words have been deleted. This method is suitable for those who are reading beyond the word recognition stage but is especially suitable for junior and senior high school students, (Trela, 1967).

The second reading indicator discussed and used in the workshop was the Gunning Formula, (Gunning, 1952). (See Appendix J.) This is one of the methods used for the determination of reading level of materials which provides an estimate of reading difficulty expressed in terms of the grade level. The Gunning Formula is viewed as generally reliable and relatively easy to apply. After securing the reading level determination for the students and having an estimate of the reading level of available instructional materials, teachers were in a position to choose and/or plan for instructional materials at an appropriate level of difficulty to motivate the learning of students in their classes.

With the increasing emphasis upon the reading disability of students, publishers are becoming acutely aware of the need for providing accurate information concerning the readability of their products. In activity-oriented curricula, of course, students learn from a variety of resources other than a textbook, for example, instructional presentations, classroom activities, and audio-visual resources. But increasingly, organizations such as the Instructional Materials Center at the University of Texas are analyzing materials using several reading formulas, reports of which may be included in the publications.

In the workshop the teachers were asked to select a book, comic book, or poster from the display provided and, considering the needs of their students, to evaluate that material using the Guide for Analysis of Instructional Materials and the Gunning Formula. Opportunities were provided to share the experience and, in addition, to review other selected materials arranged for display in the following categories: 1) audio-visual aids, 2) supplementary books, 3) free materials, and 4) teacher resources.

During the year 1976-77, efforts were made by the project staff to assemble a variety of instructional resources and to develop a collection of resource materials which were viewed as useful to teachers in meeting the learning requirements of special needs students. The materials available for review were obtained as follows: 1) some were purchased directly from publishers, 2) complimentary copies were received from a variety of sources, and

3) "on loan" materials were provided by the Saint Paul Public School System, the Home Economics Education Library at the University of Minnesota, the Minnesota Instructional Materials Center, as well as the personal collections of the project staff. The growing list of materials included textbooks, hard and soft-cover reference books, workbooks, pamphlets, games and other learning aids which could be used in teaching home economics subject matter at the junior and senior high school levels.

Later in the year at the conclusion of the pilot workshop, and after a substantial search had been made for instructional materials, a resource list of all the available materials was made which included pertinent bibliographical information. To facilitate the use of quality resources in the instructional programs, an objective of the project was the organization of a selected bibliography. Because of the diversity of the programs and the range of grade levels represented among the teachers enrolled in the pilot workshop, a broad range of subject matter areas in home economics was considered for inclusion. Materials appropriate for use with special needs students are more numerous in some areas of home economics than in others. In seeking to include at least a few suggested titles in the various areas of study, the "Selected Bibliography" (Appendix K) may have a disproportionate number of items listed which were complimentary and/or "on loan." Also, with the increased constraints on funding in many school systems, inclusion in the listing was influenced by a consideration of value in relation to cost.

Materials included in the "Selected Bibliography" were evaluated using the "Guide for Analysis of Instructional Materials." (See Appendix H.) In addition, all materials were evaluated using the Gunning Formula to determine the reading level, and all of them contained content useful in teaching home economics knowledge and skills. Those instructional resources having a reading level appropriate for junior high students or below met the readability criterion for inclusion in the bibliography. Inasmuch as the "Guide" was designed for a particular group of secondary school students, there may be a question as to its appropriateness as a general screening device. Since it was used consistently, however, by one evaluator with additional review at a later date, the result should prove a useful tool for the home economics teacher in search of resource materials for special needs students--particularly those who are mentally retarded or slow learners.

The "Selected Bibliography" includes textbooks, hard-cover and soft-cover reference books, workbooks, pamphlets, and other learning aids which may be used in teaching the following topics:

Careers
Child Care and Development
Clothing
Consumer Education-- Money and Finance
Foods and Nutrition
Independent Skills: Homemaking
Personal Development--Interpersonal Relations
General Home Economics
Teacher Resources

A section on supplementary materials includes resources which are designed for skill development--for example, measuring, using metric concepts, and reading. The last section consists of teacher resources including guides for teaching home economics concepts to special needs students, curriculum guides, teaching techniques, and information about various types of special needs students.

This session made teachers more aware of the variety of resource materials available to them, the need for a systematic recording of materials with frequent updating of the file, and the desirability of recording in the file the grade level and the special needs groups for which the materials are appropriate. Such a file, organized to suit the individual teachers' needs, would greatly facilitate the objective of individualized instruction.

WORKSHOP SESSION IV--ADAPTATION

The fourth session of the pilot workshop was focused on alternative learning methods which can be used in increasing individualization and adaptation of instruction. The teacher participants were actively involved in the learning experiences of the three-part session: 1) a film interpreting an on-going individualized classroom situation followed by a spirited "brainstorming" session; 2) reviewing an instructional delivery system including alternative learning formats; 3) teacher participation in adapting instructional materials illustrating a selected learning format.

The session was introduced by viewing a film, "Multiple Activity Learning Environments: Anderson High," which interpreted the on-going teaching-learning situation in an individualized language arts program (see Smith and Bentley, 1975b). The film presentation was followed by a spirited discussion using a "brainstorming" format. Selected examples of teacher responses included:

A few of the many positive responses:	Examples of less positive comments:
A student-oriented environment--it was their place	The situation required mature, self-directed students; many are not
Opportunity was provided for social interaction	Noisy; required concentration because of diversionary influences
Encouraged goal-setting in a flexible, resourceful, evaluative yet motivative learning situation	Much preparation time and/or additional staffing needed

In the summarizing discussion, consideration was given to the various interpretations which could be placed upon the positive and less positive comments in terms of the implications for providing a flexibly organized learning environment.

In the ensuing workshop activity, the components of instructional design were reviewed. In the subject area, the goals are to be outlined and the appropriate topics for study identified. Next, the objectives to be achieved for the first topic are to be outlined and considered one by one in terms of student activity options for achieving the objective. Although it is recognized that all students are not expected to achieve all the same objectives, yet the objectives specified the amount and level of learning expected of the students with respect to the selected topic. In designing learning activities to help students achieve the objectives, appropriate activities are selected from the array of media and methods illustrating the sensory factors in order to provide information or skill about the topic of study (input/data collection). (See Appendix L.) Other learning activities provide opportunities for the student to demonstrate what has been learned (output/data synthesis). (Smith and Bentley, 1975b.) In order to instruct the variety of students enrolled in their classes, teachers are encouraged to plan for a diversity of instructional activities in order to guide the learning experiences of a greater number of students.

In considering the management and direction of instruction, whether or not a student is capable of self-direction and has satisfactory reading skills are important qualifications in implementing a variety of learning delivery systems. For students who are self-directive and have satisfactory reading skills, instructional learning alternatives include: 1) activity cards, 2) contracts, 3) job sheets, 4) learning activity packets, 5) learning centers, and 6) programmed instruction. In the event that the student is self-directive, yet does not have satisfactory reading skills, the learner needs the assistance of audio-tape, a peer tutor, or the instructor in order to take advantage

of delivery systems such as the learning center, the learning activity packet, and/or the contract. If the student is not self-directive and cannot read satisfactorily, the assistance of the teacher, an aide, a resource person, a volunteer, or a tutor is required to facilitate student learning (Smith and Bentley, 1975b).

In providing an opportunity to try out one or more of the instructional formats, the teacher participants as "peer pairs" selected one of the six learning formats listed above, such as activity cards or job sheets. In addition, they selected one of two supplementary instructional resource units concerning small kitchen equipment and space utilization which were provided for adaptation. The choice of materials offered for use were: 1) "Small Wonders in the Kitchen" which consisted of information relative to the selection and use of small items of kitchen equipment, and 2) "A Home with New Room" which provided information concerning the solution of storage problems in the various rooms in the home. Both instructional kits were prepared by Rubbermaid Incorporated, Wooster, Ohio.

Using the suggested instructional formats, the teachers suggested modifications to be incorporated as they used the resource unit with special reference to the needs of the students they had described on the Styles Matching Chart. In concluding the session, a group discussion period provided the opportunity for each teacher pair to report on the use of the selected instructional format as well as over-all assessment of the accomplishments of the session.

WORKSHOP SESSION V--APPLICATION

In the fifth session of the pilot workshop, attention was focused on ways in which implementation of individualized instruction could be achieved. As the teachers arrived, they reviewed one or more topics relating to the implementation of alternative instructional delivery systems. Next, in a brief lecture-discussion period, the project assistant described pertinent steps to be followed in adapting instruction to meet the needs of students. Later, the teacher participants in small interest groups considered three major problems concerning multiple activity learning environments identified in discussion in the previous meeting: 1) increased costs, 2) demands made upon teacher time, and 3) lack of student self-directedness. First, sub-problems were identified, then possible solutions were considered for the more pressing problems. Finally, in the large group each sub-group reported on its discussion and offered recommendations for consideration.

Early in the session as teachers arrived, they reviewed one or more of the topics relating to the implementation of alternative instructional delivery systems. Examples included "How Can Students Be Trained to Use Learning Centers?" "Specifying Appropriate Behaviors" (from Bentley and Masters, "An Open Classroom." In Smith and Bentley, 1975b); and "How to Begin Using Packets" (from Ann Parrich, "Management of Learning Activity Packets." In Smith and Bentley, 1975b). In considering the highlights of the materials, examples of learning centers were described including an art center, a game center, library center, film center, and listening center. In implementing the more flexible learning environments, students are instructed and carefully supervised in the appropriate use of the materials and equipment. Proper use of the equipment and resources is recognized with liberal reinforcement. In general, the introduction of the various instructional formats through gradual, thorough orientation results in more independent, positive growth on the part of students.

In a lecture-discussion session, the project assistant reviewed selected variables on individualizing instruction which were considered in the previous sessions. For example, ways of adapting content, tasks to be accomplished, time allotted for achieving the objectives were considered in relation to the students' capabilities and/or special needs. Other components in the teaching/learning situation suggested as amenable to modification in helping students achieve their potential for learning were sequence, media, and reward. (See Appendix N.) In addition, the steps to be followed by the teacher as she prepared a unit of study for students with varying needs were discussed in detail, followed by examples in the selected subject areas.

The workshop sessions were reviewed in retrospect relative to the possibilities for individualizing instruction through one or more of the following formats: 1) activity cards, 2) contracts, 3) job sheets, 4) learning activity packets, 5) learning centers, and 6) programmed learning in instructional formats which encourage individual student learning.

Next, we moved toward examining ways in which one or more of the various instructional formats could be incorporated into a workable and successful instructional program. Developing an effective learning environment to match more nearly the learning needs of students requires concerted effort on the part of the teacher. As a guide for the teacher, detailed steps were suggested for adapting a unit of study. To illustrate the procedure, a set of activity cards, "Good Nutrition, A Plus for You," was designed and shared with the group. In discussion, attention was centered on: 1) The flexibility and usefulness of

cards in varying content; for example, some students may be presented with only the necessary concepts while others are directed to study the subject at more abstract and comprehensive levels. 2) An eye-catching format which may include the use of colorful cards or half-sheets of colored paper, and informal designs appealing to students. A guide for developing activity cards was discussed and shared with the group. (See Appendix M.)

As a concluding activity, the creative problem-solving approach was used to move participants toward the application of workshop ideas. It focused on three major problems identified in an earlier session which might delay including special needs students in meaningful experiences and individualized instruction: 1) increased costs, 2) demands made upon teacher time, and 3) lack of student self-directedness. In the limited time available, each group identified sub-problems and selected three on which they concentrated their efforts in identifying possible solutions. Following the listing of solutions, participants judged their feasibility and identified those they considered the most usable. For example, the sub-group considering the demands on teacher time identified sub-problems as follows: 1) too many outside pressures in school and in the home; 2) not enough organizing time and too many preparations, both those scheduled and others required within the class to meet individual needs. Suggested solutions for increasing the effective use of organizing time included: 1) planning ahead; 2) utilizing room helpers; 3) arranging for a room manager and a secretary; 4) using a zig-zag arrangement of class activities and/or coordinating activities back to back to facilitate planning so as to use the same equipment; 5) providing self-directed activities for students while the teacher prepares for the next class; 6) utilizing equipment fully in implementing the organization. In conclusion, in the large group each sub-group reported their summary and recommendations for consideration in implementing flexible learning environments.

SUMMARY AND CONCLUSIONS

In the 1976 survey of Minnesota home economics teachers, concerns were expressed by the teachers with respect to the inclusion of special needs students into the regular high school programs. The types of special needs students that were most frequently identified were those with reading and with mathematics problems and the intellectually gifted in junior high school programs. In addition, teachers expressed concern with respect to the reading level of textbooks, the lack of understanding by students of both duplicated materials and of verbal instructions, and interpersonal relations among students.

During the continuation of the project in 1976-1977 attention was focused on ways of helping teachers with special needs students in their classes. The project was funded by the Special Needs Programs, Vocational-Technical Division of the State Department of Education, and was directed by Emma Whiteford with Linda Tillman as the Project Assistant. The most important phase of the project was the Pilot Workshop which was presented in the five sessions that are described in this report.

The purpose of the workshop was to provide selected home economics teachers with opportunities for instruction and discussion focusing on the identified concerns of special needs students. The philosophy behind the workshop was that students vary in their styles of learning just as teachers vary in their styles of teaching. When a teacher becomes aware of the learning styles of her students and the possibilities for varying her own teaching styles, she can individualize classroom instruction so as to provide for all of her students without labeling special needs students and making them unnecessarily conspicuous within the group.

Participation in the workshop was limited to home economics teachers who volunteered for the experience and came from the Saint Paul Public Schools or from systems within commuting distance from the Metropolitan area. Before the holiday season 21 teachers expressed an interest in attending. Because of the record-breaking severity of the weather in January, several of the teachers reported that they could not follow through on their expressed intention to attend. The 13 who did enroll for the sessions were professionally committed, enthusiastic participants.

Within the group there was considerable variation with respect to the types of school programs in which the participants were involved and the age levels of their students. In the area of subject matter the intent at first was to

concentrate attention mainly upon Foods and Nutrition, Personal Development, and Interpersonal Relations. However, both Consumer Homemaking Education, Cooperative, and Occupational Home Economics were represented by participants. This range in subject matter offered challenges in meeting the diversity of needs represented by the participating teachers.

In general, the workshop proved to be a rewarding experience for the participants, to judge from their own evaluations. It sharpened their awareness of differences among students and, in particular, the range and variety of the special needs that might appear among their students. They became better informed about the resources available in the school, in the community, and nation-wide for teaching special needs students. They were introduced also to some new techniques of instruction. Most important of all, perhaps, some of them, and it is to be hoped all of them, acquired a new perspective with respect to all of their students and the possibilities of integrating special needs students into on-going classroom activities.

The apparent trends and development at the state and federal levels underscore the need for major efforts to improve the quality of programs available to all students. Special needs students, in particular, must be better prepared for independent living and for vocational options.

The workshop sessions described in this report were a major effort, and a rewarding one, although admittedly exploratory and limited in scope. To take full advantage of what has been learned and accomplished to date, the project should be continued so as to make possible more extensive adaptation of instructional materials and well-planned field testing to verify results. Increased opportunities should be provided for teachers to enroll in workshops, and the workshops should be credit-bearing so as to encourage enrollment and to justify the time and effort required for active participation in them.

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APPENDIX A

ADVISORY COMMITTEE

Bendston, Carol Home Economics Teacher	Little Falls High School Little Falls, Minnesota
Bublotz, John Food Service Instructor	Gateway Cooperative Center Albert Lea, Minnesota
Kraker, Eleanor Housing Careers Instructor	Duluth Secondary Vocational Center Duluth, Minnesota
Renschler, Arlo Secondary Vocational Director	Brainerd Senior High School Brainerd, Minnesota
Richardson, Mary Jo Executive Secretary, Association for Children with Learning Disabilities	Griggs Midway Building Saint Paul, Minnesota
Stuart, Dr. Kathleen Supervisor, Home Economics	Saint Paul Public Schools Saint Paul, Minnesota
Taylor, Dr. Arthur Consultant/Special Education	Saint Paul Public Schools Saint Paul, Minnesota
Warfield, Dr. Grace Associate Professor	Department of Psycho-Educational Studies University of Minnesota Minneapolis, Minnesota
Whalen, Argene Home Economics Teacher	North Saint Paul Public Schools North Saint Paul, Minnesota
Wilkosz, Dr. Joan Supervisor, Home Economics	Minneapolis Public Schools Minneapolis, Minnesota

Representing the State Department of Education:

Grote, Audrey Supervisor, Consumer/ Homemaking Occupations	Vocational Technical Division Capitol Square Building Saint Paul, Minnesota
Strom, J. Thomas Coordinator, Programs for the Handicapped	Vocational Technical Division Capitol Square Building Saint Paul, Minnesota

APPENDIX B

WORKSHOP PARTICIPANTS

Anderson, Astrid M.	Como Park Junior High School Saint Paul, Minnesota
Baker, Karen	Armstrong Senior High School Plymouth, Minnesota
Brennecke, Patti, R.	Saint Paul Open School Saint Paul, Minnesota
Fore, Myrtle	Highland Park Junior High School Saint Paul, Minnesota
Lawler, Catherine McCann	Roosevelt Junior High School Saint Paul, Minnesota
Nielsen, Mary M.	Wayzata Junior High School Wayzata, Minnesota
Pechmann, Ruth S. N.	Harding High School Saint Paul, Minnesota
Reich, Shirley	Roosevelt Junior High School Anoka, Minnesota
Schollmeier, Abbie	Highland Park Senior High School Saint Paul, Minnesota
Speck, Sandra J.	Child Development Center Saint Paul, Minnesota
Wallace, Rosemary	Highland Park Junior High School Saint Paul, Minnesota
Watson, Nancy L.	Highland Park Junior High School Saint Paul, Minnesota
Ylonen, M. Helen	Cleveland Junior High School Saint Paul, Minnesota

Appendixes D through G, I, and L containing copyrighted material were removed.

They included excerpts from the following sources:

Smith, Pamela Bodoin and Glee Ingram Bentley, Data Bank Guide-Learning Styles. Mainstreaming Mildly Handicapped Students into the Regular Classroom. Education Service Center, Region 13, Austin, Texas, 1975c.

Smith, Pamela Bodoin and Glee Ingram Bentley, Data Bank Guide-Instructional Management. Mainstreaming Mildly Handicapped Students into the Regular Classroom, Education Service Center, Region 13, Austin, Texas, 1975b.

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Workshop: Special Needs Students in Home Economics Programs

Purpose: To provide home economics teachers with opportunity for discussion and instruction focusing on concerns regarding special needs students.

Objectives: As a Workshop participant you will:

- become aware of your personal teaching styles
- learn to match teaching styles and student learning styles (assisting special needs students with reading and/or math difficulties or special learning problems)
- become familiar with a variety of teaching models/techniques to promote learning for students with various types of special needs
- be able to use suggested criteria for evaluation of materials
- develop or simplify instructional materials and/or evaluate such materials for use with students with various types of special needs
- evaluate content and presentation of the workshop series

Workshop I **AWARENESS**
Jan.6, 1977 3:15-5:30

A look at.....
- learning from the students perspective
- student learning styles
- assessing where the students are
- your own teaching style

Workshop II **TECHNIQUES**
Jan.13

Techniques, methods, models, strategies, and suggestions that encourage teacher and student success in your classroom.

Workshop III **SELECTION**
Jan.27

- When opportunity knocks and money for new materials arrives - which texts or materials are best?
- How to choose and use the books off your shelves?
- Selecting what you borrow.....

For Further Information: Emma Whiteford
284 North Hall
Univ. of Minnesota
St. Paul, MN 55108
(612)-373-1538

Workshop IV **ADAPTATION**
Feb.10

Using what you have to adapt instuctional materials.....
- planning additional activities
- taking advantage of free materials
- alternatives for students

Workshop V **APPLICATION**
Feb.17

Managing a learning environment to meet individual needs can be done! Where do we go from here?

Location: S.E.I.M.C.
2nd floor
Colburne Building
West 7th and Jefferson

Emma Whiteford
Division of Home Economics Education
Department of Vocational
and Technical Education
University of Minnesota
284 North Hall
St. Paul, Minnesota 55108

Special Needs Students in Regular Home Economics Programs

APPENDIX H

_____ date

_____ evaluator

GUIDE FOR ANALYSIS OF INSTRUCTIONAL MATERIALS*

Suggestions for using the checklist with reading materials:

1. *Read the preface in the student text and introductory comments addressed to the teacher in the teacher's guide.*
2. *Look at the table of contents. --Do the chapter divisions make sense? --Do they build on each other?*
3. *Is there a glossary at the end of the book? chapter? section?*
4. *Read a chapter of the text.*
5. *Now, begin to use this checklist.....*

_____

author title

_____

publisher address pub. date cost

Place an "X" in the appropriate box on each continuum.

CONTENT:	1	2	3	4	5	
1. Interesting, appealing						Dull, weak
2. Useful or valuable						Inappropriate or unrelated to real life activities
3. Reading level suitable for potential users						Reading level too low or too high
4. Personally oriented						Impersonal or abstract
5. Principles stressed						Prescriptions and judgments (preachy)
6. Content follows in sequential order--building one concept on another						Concepts presented out of sequence
7. Summary provided or summarizing activities planned						No summary or review
8. Flexible (can be used for several purposes)						Rigid or limited

Place an "X" in the appropriate box on each continuum.

FORMAT:	1	2	3	4	5	
9. Looks attractive						Dull or unappealing
10. No indication of ability						"Slow learner, remedial, "special needs" on cover etc.
11. Appropriate illustrations						Illustrations too childish or social class oriented, sexually biased or unsuitable to content.
12. Enough illustrations						No illustrations or too few
13. Illustrations next to written idea						Removed from written idea or not related to content
14. Adequate print size						Print too large or too small
15. Spacing, heading, and paragraph length suitable for reading level						Not enough "white space" and different headings to guide the reader
16. Important ideas emphasized by underlining, italics, varying type, color or spacing						Important or main ideas difficult to locate
17. Lists or numbers steps or procedures						Steps or procedures "disguised" in paragraph form
18. New vocabulary words are introduced						Unfamiliar words are given no explanation
19. Provides opportunity for participation by reader						No opportunity for reader involvement

additional comments.....

*Adapted from "Analysis of Low Reading Level Materials", Spitze, Hazel Taylor, "Consumer Education and the Literacy Problem." Illinois Teacher for Contemporary Roles, Champaign-Urbana, Illinois, Home Economics Education, University of Illinois, November-December, 1971, pp. 58.

APPENDIX J

GUNNING READABLITY FORMULA

1. TAKE A 100 WORD SAMPLE FROM THE BOOK OR ARTICLE (STOP AT THE END OF THE SENTENCE CLOSEST TO 100 WORDS.)

2. COUNT THE NUMBER OF SENTENCES IN THE SAMPLE.

3. FIND THE AVERAGE LENGTH OF THE SENTENCES. (DIVIDE THE TOTAL NUMBER OF WORDS BY THE NUMBER OF SENTENCES.)

4. COUNT ALL OF THE WORDS WITH THREE OR MORE SYLLABLES IN THE SAMPLE. (DO NOT COUNT...
   - -VERBS ENDING IN "ED"
   - -COMPOUND WORDS MADE UP OF SIMPLER WORDS LIKE "BOOK-KEEPER"
   - -CAPITALIZED WORDS.)

5. ADD THE AVERAGE LENGTH OF THE SENTENCES AND THE NUMBER OF WORDS WITH THREE OR MORE SYLLABLES AND MULTIPLY BY .4 .

   SAMPLE: IF THE AVERAGE SENTENCE LENGTH WERE 12 AND THERE WERE 8 THREE SYLLABLE WORDS. THE MATERIAL WOULD BE AT AN EIGHTH GRADE READING LEVEL.

   $$(12 + 8) \times .4 = 8$$

6. TAKE SEVERAL SAMPLES FROM THE BOOK AND AVERAGE THEM.

Adapted from: Gunning, Robert. The Techniques of Clear Writing, New York: McGraw-Hill Book Company, 1952.

APPENDIX K

SELECTED BIBLIOGRAPHY

AUTHOR, TITLE, ADDRESS.	PAGES	COST*	READING LEVEL
CAREERS			
BOOKS AND PAPERBACKS...			
Food Service Worker. Delmar Publishers, Mountainview Ave., Albany N.Y. 12205 1970. (workbook)	56 pp.	$1.05	6.1
Fane, Xenia F., Child Care Careers. Prentice-Hall, Inc., Educational Book Division, Englewood Cliffs, N.J. 07632 1977. (paperback)	122 pp.		7.6
Fraenkel, William A., How To Get A Job. The President's Committee on Employment for the Handicapped, Washington, D.C. 20210 (booklet)	27 pp.	free	6.5
Goble, Dorothy Y., How To Get A Job And Keep It. Steck-Vaughn Company, Box 2028 Austin, Texas 78767 1975. (workbook)	63 pp.	$1.05	7.6
Hudson, Margaret W. and Ann A. Weaver. On The Job. Frank E. Richards Publishing Company, Inc., 330 First Street, Box 370, Liverpool, N.Y. 13088 1965. (workbook)	34 pp.	$1.25	5.7
Cincinnati Public Schools, Exploring Careers Series, Exploring Careers in Child Care, Exploring Careers in Fabrics., Exploring Careers in Hospitality and Food Service., Exploring Careers in Living Environments., McKnight Publishing Company, Bloomington, Il. 61701 (sets of hard covers, teacher manual etc.)	approx. 350 pp.		approx. 6.8-8.0
LEARNING AIDS...			
Rath, Patricia Mink; Ralph E. Mason, and Lloyd J. Phipps, Applying For A Job. The Interstate Printers and Publishers, Inc., Danville, Ill. 61832 1968. (70 6" x 4" cards)	--	$3.95	5.6

*Prices listed for these items are accurate within the year, yet are subject to change.

CHILD CARE AND DEVELOPMENT

PAMPHLETS...

About Baby Sitting.(1976), So You're Going to Have a Baby. (1976), Your Baby's First Year. (1976), What's A "Family"?. (1975).Channing. L. Bete Company, Greenfield, Mass. 01301	each 15 pp.	each $ .25	6.7
Guide For The First Time Babysitter. Johnson & Johnson Baby Products Company, Consumer and Professional Services, New Brunswick, N.J. 08903. 1975.	13 pp.	Single free	6.5
U.S. Department of Agriculture, Feeding Baby: Breast Feeding, Bottle Feeding., Feeding Baby: Solid Foods., Making Baby Food At Home., Preparing Baby Formulas. Cooperative Extension, University of Minnesota, St. Paul, Mn. 55108 1972.	7 pp.	Single free	7.3
U.S. Department of Agriculture, Learning More About Children. Cooperative Extension, University of Wisconsin. 1969.	16 pp.	$ .20	6.8

LEARNING AIDS...

Baby Care Educational Kit. Johnson & Johnson, Instructional Materials Laboratories, Inc., 200 Madison Ave. N.Y., N.Y. 10016. 1975 (Classroom set includes: 30 student manuals, 1 instructor's manual, 8 progress test spirit masters, 1 filmstrip, 4 pamphlets & a baby care demo-kit.)	manual 67 pp.	$16.00	8.7

CLOTHING

BOOKS AND PAPERBACKS...

Ready, Set,Sew. Butterick Fashion Marketing Company, Inc., 161 6th Ave., N.Y., N.Y. 10013 1971. (illustrations very good)	320 pp.	$4.95	9.4
Corrigan, Barbara, Of Course You Can Sew. Doubleday & Company, Inc., School and Library Div., Garden City, L.I., N.Y. 11530 1971.	127 pp.	$4.95	8.6

CLOTHING CONTINUED...

Dunn, Lucille; Annetta Bailey, and Wanda Vansickle, Steps in Clothing Skills. Charles A. Bennett Company, Inc., 809 W. Detweiller Drive, Peoria, Il. 61614 1970.	528 pp.	$8.37	5.4
Hanson, Margaret. The Care We Give Our Clothes. Steck-Vaughn Company, Box 2028, Austin, Texas 78767 1966.	94 pp.	$1.44	6.1
U.S. Department of Agriculture, Fun With Clothing Project with leaders guide. Things To Do And Make for Girls Enrolled In the Fun With Clothing Project. Cooperative Extension Programs, University of Wisconsin-Extension, Madison, Wisconsin. (booklets)	each 30 pp.		8.0
U.S. Department of Agriculture, The Clothes You Make. (Project description guide, guide for Teens and Adults) Clothing Sense. (with leader's guide) Clothing Speaks. (Leader's guide and members manual) Agricultural Extension Service, University of Minnesota, St. Paul, Mn. 55108 1974.	each 8 pp.		6.8

Learning Aids...

John, Hildegarde; Barbara Clawson and Sarah M. Schoffner. Individualized Sewing System. Ginn and Company, 191 Spring Street, Lexington, Mass. 02173 ("self-teaching, "self-learning". 62 folders, 30 student tests, instructional books.) 1974.	each st. book 6 pp.	$182.00	6.8
Learn To-Sew, The Teacher's To-Sew Kit. To-Sew, P.O. Box 974, Malibu, Calif. 90265 1972. (Teacher's kit: 6 patterns, 6 demonstration guides, evaluation sheets, progress sheets, student book.)	st. book 50 pp.	kit: $5.00 book: $2.00	7.3

CONSUMER EDUCATION--MONEY AND FINANCE

BOOKS AND PAPERBACKS...

Bendick, Jeanne and Robert. The Consumer's Catalog of Economy and Ecology. McGraw-Hill Book Company, 1221 Ave. of Americas, N.Y., N.Y. 10020 1974. (paperback)	160 pp.	$8.37	5.4

CONSUMER EDUCATION--MONEY AND FINANCE CONTINUED...

Chapman, Byron and others. Consumer Buying Basic--Numbers and Money. (The Mott Basic Language Skills Program) Allied Education Council, Distribution Center, Galien, Michigan 49113 1975. (workbook)	146 pp.	$1.75	5.9
Finkelstein, Milton and Arthur Nitzburg, Living In A Consumer World. Globe Book Company, 175 Fifth Ave. N.Y., N.Y. 10010 1974. (paperback with teacher's guide)	406 pp.	$4.20	6.4
Kahn, Charles H. and J. Bradley Hanna, Working Makes Sense. Fearon Publishers, Inc., 6 Davis Drive, Belmont, Calif. 94002 (workbook)	112 pp.	$1.80	5.1
Spitze, Hazel Taylor and Patricia H. Rotz, Where Does The Money Go? Steck-Vaughn Company, Box 2028, Austin, Texas 78767 1969. (workbook)	94 pp.	$ .99	3.9
Udvari, Stephen S. and Janet Laible, Buying Guides. and Family Money Management. (Family Development Series), Steck-Vaughn Company, Box 2028, Austin, Texas 78767 1973.	95 pp. 112 pp.	each $1.44	6.0

PAMPHLETS...

Schnittgrund, Karen P., Jeanne L. Hafstrom, and Marilyn M. Dunsing. "How the Johnsons Series"(10 pamphlets on food shopping and money management) University of Illinois, Department of Home Economics, Urbana, Ill. 61801 1973.	each 10 pp.	each 10¢ or 15¢	5.9
U.S. Department of Agriculture, Should You Buy On Time? Cooperative Extension, University of Minnesota, St. Paul, Mn. 55108 1972.	6 pp.	$ .05 single free	5.4

LEARNING AIDS...

Getting Down to Basics...About Advertising. Proctor and Gamble Company, Professional Services Division, Cincinnati, Ohio 45201 (Includes: record, poster, filmstrip, and pamphlets)		$7.00	

FOODS AND NUTRITION

BOOKS AND PAPERBACKS...

Bruno, Janet, and Peggy Dakan. Cooking in the Classroom. Fearon Publishers, 6 Davis Drive Belmont, Calif. 94002 1974. (paperback)	61 pp.	$2.75	3.9
Cronan, Marion L. and June Atwood. First Foods. Charles A.Bennett Company, Inc., 809 West Detweiller Drive, Peoria, Ill. 61614 1976. (hard cover)	286 pp.	$9.72	5.6
Let's Do Some Cooking, Continuing Education Publication Company, P.O. Box 2590 Station A Champaign, Ill. 61820 1977. (recipes with symbols for low functioning readers)	86 pp.	$6.50	3.6
Paul, Aileen. Kids Cooking Complete Meals: Menus, Recipes, Instructions. Doubleday & Company, Inc., School and Library Divsion, Garden City, L.I., N.Y. 11530 1975.	141 pp.	$4.95	6.8
Shenk, Carol. Sue Learns About The Use Of Measurements In Cooking. Frank E. Richards Publishing Co., Inc., 330 First Street, Box 370, Liverpool, N.Y. 13088 1971. (workbook)	89 pp.	$2.85	6.4
Spitze, Hazel Taylor and Patricia H. Rotz. We Are What We Eat. Steck-Vaughn Company, Box 2028, Austin, Texas 78767 1966. (workbook)	101 pp.	$1.35	5.3
Udvari, Stephen S. and Janet Laible. Health, Safety, and Sanitation. Steck-Vaughn Company, Box 2028, Austin, Texas 78767 1969.	96 pp	$1.44	7.9
Weaver, Ann A. Getting Ready to Cook., Planning Meals and Shopping., and Young Homemakers Cookbook. Fearon Publishers, Inc. 6 Davis Drive, Belmont, Calif. 94002 1973. (all three student workbooks have teacher guides available)	58 pp.	$2.20	5.0

FOODS AND NUTRITION CONTINUED...

PAMPHLETS...

U.S. Department of Agriculture, To Help You Go And Grow. (Funsheets No. 1-10 with Leader Guides). Agricultural Extension Service, University of Minnesota, St. Paul, 55108 1972	each 4 pp.		5.6
U.S. Department of Agriculture, Easy Dishwashing., Broiling. Making Yeast Breads.,Family Food-Daily Food., Family Food-Fruits and Vegetables.Breads and Cereals.,Meat and Meat Foods., Hamburger., Milk., Eggs., You and Your Weight., More For Your Meat Dollars., More For Your Food Dollars., Dry Beans and Peas., More For Your Fruit and Vegetable Dollar., Foods To Eat Each Day. Cooperative Extention Service, University of Minnesota, St. Paul, 55108 1972.	each 6 pp.	$ .05 single free	5.4

LEARNING AIDS...

Food Models. National Dairy Council, 6300 North River Road, Rosemont, Illinois 60018 (146 full color life size photographic models with teacher guide.)		set: $4.50	
Small Wonders in the Kitchen. Rubbermaid, Inc., Wooster, Ohio 44691 (poster and spirit masters for learning about kitchen equipment)		free	

INDEPENDENT SKILLS: HOMEMAKING

BOOKS AND PAPERBACKS...

Belina, Virginia Sweet, Planning Your Own Apartment. Fearon Publishers, Inc., 6 Davis Drive, Belmont, Calif. 94002 1975. (with teacher's guide) (paperback)	91 pp.	$2.25	6.1
Housekeeping Directions--A Simplified Guide. The Soap and Detergent Association, 475 Park Ave. South, New York, N.Y. 10016 1974. (paperback)	62 pp.	$ .25	5.4

INDEPENDENT SKILLS: HOMEMAKING CONTINUED...

LEARNING AIDS...

A Home With New Room. Rubbermaid Inc., Home Service Center, 1147 Akron Road, Wooster, Ohio 44691 (kit includes: an 11 frame mini-filmstrip, leader's guide and filmstrip script, sample student booklet)	--	free	

PERSONAL DEVELOPMENT AND INTERPERSONAL RELATIONS

Begin Me. Stage Three: Involvement. Science Research Associates, Inc., 259 East Erie Street, Chicago, Ill. 60611	48 pp.	$1.24	4.6
Clayton, Thomas. What It Takes. Fearon Publishers, Inc., 6 Davis Drive, Belmont, Calif. 94002 1972. (paperback with teacher's manual)	140 pp.	$2.01	4.3
Fleck, Henrietta and Louis Ferandez, Exploring Family Life. 4th Edition, Prentice-Hall, Inc. Englewood Cliffs, N.J. 07632 1977. (hardcover) (Titles, steps & procedures good)	375 pp.		9.2
Hudson, Margaret W. and Ann A. Weaver, In Your Family. Fearon Publishers, Inc, 6 Davis Drive, Belmont, Calif. 94002 1973. (workbooks)	30 pp.	$1.32	5.0
Hudson, Margaret W. and Ann A. Weaver, Plans for Living. Lear Siegler, Inc., Fearon Publishers, Inc., 6 Davis Drive, Belmont, Calif. 94002 1971. (workbook with teacher's manual)	58 pp.	$1.65	3.9
Kahn, Charles H.; Robert Tong and Wing Jew. Going Places With Your Personality. Fearon Publishers, Inc., 6 Davis Drive, Belmont, Calif. 94001 1971. (workbook with teacher's manual)	52 pp.	$2.04	5.5
Turner, Richard C. The Friends You Make., The Family You Belong To., and The Person You Are. Follett Publishing Company, 1010 W. Washington Boulevard, Chicago, Ill. 60607 1974. (workbooks)	48 pp.	$1.38	5.4

PERSONAL DEVELOPMENT--INTERPERSONAL RELATIONS CONTINUED...

Udvari, Stephen S. Understanding Yourself., Communicating With Others., Becoming A More Effective Person., Steck-Vaughn Company Box 2028, Austin, Texas 78767 1973. (workbooks)	80 pp.	$1.44	7.8

LEARNING AIDS...

Becoming Yourself. Scholastic Magazine, Inc. 904 Sylvan Ave., Englewood Cliffs, N.J. 07632 1975. (4 filmstrips and 4 tapes)	--		
The Skin You Live In. Vick Chemical Company (Clearasil) available from Bear Films, Inc., P.O. Box R Baldwin, N.Y. 11510 1974. (filmstrip, record, pamphlets)	--	free loan	

GENERAL HOME ECONOMICS

BOOKS AND PAPERBACKS...

Albright, John Brannon and others, Better Times. Dolphin Books, Doubleday & Company, Garden City, L.I., N.Y 11530 1975. (paperback)(Titles, steps and procedures are clear...good for reference purposes)	319 pp.	$4.95	6.0
Dunn, Martha Davis and M. Yvonne Peeler, Living, Learning, and Caring. Ginn and 191 Spring Street, Lexington, Mass. 02173 1976. (hardcover)	400 pp.	$8.25	5.7
Reiff, Florence M., Steps in Home Living. Charles A. Bennett Company, 809 West Detweiller Drive, Peoria, Ill. 61614 1971, (hardcover with teacher's guide)	176 pp.	$4.20	5.9
Kahn, Charles; Sylvia K. Herring,and Robert Tong, Measure Up. Fearon Publishers, Inc., 6 Davis Drive, Belmont, Calif. 94002 1968. (workbook and teacher's manual) (focus on math and accuracy of measuring)	60 pp.	$2.20	5.8

TEACHER RESOURCES

BOOKS AND PAPERBACKS...

Aubrey, Ruth H., Selected Free Materials For Classroom Teachers. Fearon Publishers, Inc. 6 Davis Drive, Belmont, Calif. 94002 1975. (paperback)	130 pp.	$2.50
Bobbitt, Norma and Alberta Dobry. The Development and Implementation of Curriculum Approach for the Conceptual Reorientation of Secondary Home Economics Program with Emphasis on Meeting Needs of Special Groups: Improving One's Emotional Make-up., Improving Relationships with Friends., Improving Relationships with Siblings., Improving Relationships with My Family. Michigan State University, College of Human Ecology, Department of Family Ecology, East Lansing, Mich. 48823	each approx. 30-40pp.	
Brackett, Shirley. Tips and Techniques for Homemaking Teachers. Homemaking Research Laboratories, Tonay, Wis. 54563 1975. (paperback)	120 pp.	$5.30
Buchan, L. Gerald. Roleplaying and the Educable Mentally Retarded. Fearon Publishers, Inc., 6 Davis Drive, Belmont, Calif. 94002 1972. (Paperback)	60 pp.	$2.50
Canfield, Jack and Harold C. Wells, 100 Ways To Enhance Self-Concept In The Classroom-A Handbook For Teachers and Parents. Prentice-Hall, Inc., Englewood Cliffs, N.J. 07632 1976. (paperback)	253 pp.	$6.95
Davis, Reba J. (Project Director) Teaching Techniques and Resource Materials Development for Nutrition Education Among Disadvantaged Youth and Adults. The University of Arkansas, Fayetteville, Arkansas 72701 1974. (paperback, Volumes I (68 pp.), II (258 pp.) & III (138 pp)		$10.00
Fraenkel, William A., Preparing For Work. The President's Committee on Employment of the Handicapped, Washington, D.C. 20210 1975. (paperback)	17 pp.	free

TEACHER RESOURCES CONTINUED...

Fry, Barbara and Josephine Swanson. Learning Nutrition Through Discovery, a Teacher's Guide. Department of Human Nutrition and Food, College of Human Ecology, A Statutory College of the State University, Cornell University, Ithaca, N.Y. 14953 1975. (looseleaf notebook)	110 pp.	$1.35
Gaddis, Edwin A., Teaching The Slow Learner In The Regular Classroom. Fearon Publishers, Inc., 6 Davis Drive, Belmont Calif. 94002 1968.	99 pp.	$2.95
Harmin, Merril; Howard Kirschenbaum, and Sidney B. Simon, Clarifying Values Through Subject Matter--Applications for the Classroom. Winston Press, 25 Groveland Terrace, Minneapolis, Minn. 55403 1973 (paperback)	146 pp.	$2.95
Klinger, Judith Lannefeld; Fred H. Freiden, and Richard A. Sullivan. Mealtime Manual For The Aged And Handicapped. Essandess Special Edition, Simon & Schuster, Inc., 630 Fifth AVe. N.Y.,N.Y. 10020 1970. (paperback)	242	approx. $2.50
Lowman, Edward and Judith Lannefeld Klinger, Aids To Independent Living, Self-help For The Handicapped. McGraw-Hill Book Company, 1221 Ave. of the Americas, N.Y.,N.Y. 10020 1969. (hardcover)	796 pp.	approx. $21.00
Morlan, John, Classroom Learning Centers. Fearon Publishers, Inc., 6 Davis Drive, Belmont, Calif. 94002 1974.(paperback)	90 pp.	$5.25
Shipe, Mary, Vocational Related Training For Special Students. Vocational-Technical Education, Nashville, Tennessee 37219 1968 (paperback)	225 pp.	$4.50
The Newspaper In Secondary English and Language Arts., and The Newspaper In Secondary Social Studies. Minneapolis Star and Tribune with Curriculum Division of the Minneapolis Public School, Minneapolis Star and Tribune, 425 Portland Ave. Mpls., Minn. 55415 1969.	each approx. 30 pp.	free

APPENDIX M

ACTIVITY CARDS

1. Are modular and flexible.....It is not necessary that every card be used by every student.

2. Compactly packaged.....easily stored.

3. Re-usable.....especially if printed on card stock.

4. Generally organized around a topic, concept or skills continuum.

5. Each card provides direction for specific learning activities.

6. May specify what is to be learned by stating a question.

7. Usually arranged sequentially. May be arranged other ways--by topic, for example, if cards are inter-related yet independent of sequence. This allows the student to choose the card of greatest interest.

8. Stored in an accessible area.

9. Basically, the student pulls a card, completes the task, returns the card, then checks with the teacher.

10. Teacher's role is to a) diagnose student needs, b) refer student to appropriate cards, and c) keep record.

Adapted from:

Smith, Pamela Bodoin and Glee Ingram Bentley. Learning Station: Activity Cards, Instructional Management. Mainstreaming Mildly Handicapped Students into the Regular Classroom. Education Service Center, Region XIII, Austin, Texas, 1975b.

APPENDIX N

INDIVIDUALIZING.....

Individualizing our programs and teaching styles to meet the needs of our students involves a number of variables. Most commonly we consider the pace of content and we vary the time students spend to complete a task. Although this may meet the needs of some there are other variables to consider.

Dr. Robert Schultheis of Southern Illinois University suggests that individualizing for students means that we vary all of the following:

1. time
2. content
3. sequence
4. media
5. reward

In these workshop sessions we have looked at activity cards, job sheets, learning contracts, programmed instruction, learning activity packets and learning centers as instructional formats that encourage independent student learning. Now it is time to see if all of this can be put together into a workable and successful program.

Limitations exist as teachers may not be able to use all of the instructional formats comfortably: each unit, topic, week, etc. may not be suited to a learning center, displays, activities; or students may lack the self-directedness needed. Nevertheless, we must make good attempts at developing a learning situation which matches the learning needs of our students.

Steps Followed by Adapting Teacher

1. Read through entire unit. Make a list of:
   A. Main ideas or concepts
   B. Activities already suggested

2. Divide concepts into categories such as:
   A. Necessary for independent living
   B. Helpful/useful
   C. Interesting but not necessary

3. List "back-up" or support materials and activities for the main ideas of concepts:
   A. Out-side speaker or field experience
   B. Audio-Visual film supporting topic, language master card slide set, tape recordings, transparencies
   C. Pictures
   D. Resource books in library or in HE room
   E. Content in magazines or newspapers
   F. Free pamphlets from companies
   G. Bulletin board ideas
   H. Experiments that could be done
   I. Games, etc. .....

4. Write appropriate objectives for this unit. Please consider:

   A. Varying time

   B. Varying content and sequence of content--for some students only necessary concepts should be presented as other ideas will just confuse the students as to the main ideas

   C. Varying media--rather than having all students read the book, could some "read" while listening to a tape of it? Could some learn th major concepts in another way? How about learning centers, direct experience, using a language master or a peer learning situation?

   D. Varying the reward. What happens when the student does complete the task and meet the objective? Can you make the outcome positive for the student? What would make them feel good about accomplishing the task?

   E. Varying the group size. Some students will like learning independently, some in groups, but the same thing all the time is boring even if you basically prefer that method.

NOTE: You will have to write more than one overall objective as your students will vary in their needs. Objectives can express the focus of the content, the time allowed for completion, the outcome expected.

5. Get it Together for each objective:

   - Organize the "back up" materials needed

   - Provide the student with a guide for achieving that objective (assignment sheet, workbook, learning guide or packet, etc.)

Reprinted from:

Tillman, Linda. "Modifying Materials for Special Needs Students." Minneapolis-Saint Paul, Minnesota. (Mimeo.). 1977.